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ECONOMIC COMMISSION FOR ASIA AND THE FAR EAST

Committee for Coordination of Investigations
of the Lower Mekong Basin
(Cambodia, Laos, Thailand and the Republic of Viet-Nam)

PLAN OF OPERATION

THE SAMBOR INVESTIGATION PROJECT FOR DEVELOPMENT

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I. INTRODUCTION

1. In 1960 the Committee for Coordination of Investigations of the Lower Mekong Basin (hereinafter referred to as "the Committee") requested the countries concerned to provide their positive assistance in promoting the surveys of the selected sites for early development, namely, Pa Mong, Sambor and Tonle Sap, and further, at its Fourteenth Session held in May 1961, requested the Government of Japan to undertake the investigation of the Sambor site.

2. In accordance with this request, the Government of Japan sent a preliminary investigation team consisting of fifteen specialists on economics and other fields in October 1961, to conduct the reconnaissance survey at Sambor. Further, in January 1962, a technical survey team was dispatched there and engaged in works such as hydrologic survey, observation of water level, etc. along the proposed dam centre line of the site. The report on the above preliminary investigations was submitted to the Committee at its Nineteenth Session held at Vientiane in January 1963 and accepted with appreciation by the Committee.

3. Prior to this, the tentative interim report on the investigations was submitted to the Seventeenth Session of the Committee held in Tokyo in March 1962. At this Session, the Government of Japan stated its intention to undertake further investigation at Sambor in the dry-season during 1962-63, which is to form a part of the Sambor Comprehensive Development Investigation.

4. Accordingly, the Government of Japan sent a technical survey team for the Sambor Project consisting of 21 members in January 1963 to conduct field investigations including hydro-electric, geological, agricultural, navigation improvement and power market investigations. The first progress report on this investigation was submitted to the Twenty-Third Session of the Committee held in Bangkok in January 1964.

5. At the Twentieth Session of the Committee held in Manila in March 1963, the Government of Japan expressed its intention to continue the present Mekong Investigation Programmes. A survey team consisting of 25 members was thus dispatched in October 1963 and, with emphasis placed on the hydro-power aspect, conducted the field investigations related to topography, geology, material and hydrology. In addition, the team carried out the domestic planning works such

as review of the Project, material test, hydraulic model test, analysis of agricultural and power market data. The second progress report will be submitted to the Committee in September 1964.

6. At the Twenty-Third Session of the Committee held in Bangkok in January 1964, the Government of Japan renewed its intention to continue the present Mekong Investigation Programmes. The actual work of the investigation is to be implemented by the Overseas Technical Cooperation Agency (OTCA) which is an executing agency of the Government of Japan.

7. The present document sets forth a plan of operation for the third year investigation of the Sambor Development Project to be conducted in the wet-season (August to September 1964) and the dry-season (November 1964 to January 1965) by the Government of Japan in cooperation with the Committee and the Government of Cambodia.

II. GENERAL DESCRIPTION OF THE PROJECT

8. The interim report of the preliminary survey suggests that a dam, approximately 29 km. in crest length and 36 m. in height from the bedrock, be built at the site of the lower stream of Samboc Rapids assuming the constant high water level to be EL 40 m, with a spillway, power station and navigation lock as appurtenances. After the completion of the first stage of construction, its maximum discharge will be 2,500 m^3/sec (3,000 m^3/sec in wet-season), its maximum capacity, 620,000 kW, and its annual output, 4.6 billion KWH.

9. The power produced at the Sambor Power Station will be used not only for the general purposes in Cambodia and Viet-Nam but will serve in promoting the development of local industries. Furthermore, the dam will contribute to navigation improvement and irrigation.

III. SCOPE OF WORK

10. The investigation project to be conducted under this Plan of Operation covers the following scope of work.

/A.

A. Project Investigation

(a) Power Market Survey. Investigation on power demand and locational conditions of heavy electricity-consuming industries, and collection of additional data, based upon the results of the data analysis conducted in the previous year.

(b) Investigation on Transmission Line. Investigation on main transmission line for the proposed area of heavy electric consumption, keeping pace with the above power market survey.

The investigation consists of selection of the transmission route by observation by means of aeroplane and land vehicle, collection of meteorological data, and geological survey of the proposed sites of transmission towers.

(c) Investigation on Inland Navigation. Collection of additional data, survey of traffic volume (sampling), geological survey of the proposed navigation channel and lock site, subsequent to the investigation performed in the wet-season (August 1963) of the previous year.

(d) Agricultural Survey. As the Committee is preparing the maps (1/20,000) for the irrigation planning of the Sambor Project, survey of this year is to be confined to the land-use and water-use conditions, soil sampling, farmers' economy and farm management, and the reconnaissance along the proposed main irrigation canal.

(e) Investigation on Dam and Hydro-electric power. Continuation of hydrological investigation, additional topographical and geological surveys, placing emphasis on the domestic planning work based on the investigation results which have been obtained so far.

B. Project Planning

(a) Power Market Survey. Compilation and analysis of data and results obtained in the investigation, which will serve in defining the scale of the power generating project at Sambor site.

(b) Investigation on Transmission Line.

i. Compilation and analysis of data and results obtained in the investigation.

/ii.

ii. Selection of transmission line route.

iii. Rough designing.

iv. Rough estimation of the construction cost.

(c) Investigation on Inland Navigation

i. Compilation and analysis of data and results obtained in the investigation.

ii. Selection of channel line.

iii. Rough designing.

iv. Rough estimation of the construction cost.

v. Study of the economic efficiency.

(d) Agricultural Survey. Compilation and analysis of data and results obtained in the investigation.

(e) Investigation on Dam and Hydro-electric Power.

i. Selection of the dam center line.

ii. Design of the dam and the power plant.

iii. Review of hydrological and hydrographical data.

iv. Calculation of the electric energy to be generated.

v. Rough estimation of the construction cost.

vi. Study of the economic feasibility.

C. Preparation of an interim report

IV. PRIVILEGES, IMMUNITIES AND FACILITIES

11. The Japanese members of the survey team to be organized for the Project (hereinafter referred to as "the team") shall be entitled to the following privileges and immunities:

(a) Immunity from legal process in respect of all acts performed by them in the execution of the Project;

(b) Immunity from national service obligations;

(c) Immunity from immigration restrictions;

(d) The privilege of bringing into the country reasonable amounts of

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foreign currency for the purpose of the Project or for personal use of such members, and of withdrawing any such amounts brought into the country or, in accordance with the relevant foreign exchange regulations, such amounts as may be earned therein by such members in the execution of the Project;

(e) The same repatriation facilities in the event of international crisis as diplomatic envoys enjoy; and

(f) Inviolability of all papers and documents relating to the Project.

12. The Government shall either exempt or bear the cost of any taxes, duties, fees or levies which may be imposed by it on the Team or its Japanese members in respect of:

(a) The salaries, wages or allowances earned by such members in the execution of the Project;

(b) Any equipment, materials and supplies brought into the country in connection with the Project or which, after having been brought into the country, may be subsequently withdrawn therefrom; and

(c) Any property brought, including one privately owned automobile per person, by the Team or its members for their personal use or consumption or which, after having been brought into the country, may subsequently be withdrawn therefrom upon departure of such members. If despite this paragraph import duties are collected, then the Government making the collection shall make an equivalent cash payment to the Team or the person concerned.

13. The privileges and immunities (except for the immunity in paragraph 11.(b)) to which the Team and its personnel are entitled may be waived by the Government of Japan, where, in its opinion, such privileges and immunites would impede the course of justice and can be waived without prejudice to the successful completion of the Project or to the interest of the Team.

14. In paragraph 12 of this chapter, "the Government" refers to either one or more of the Governments of Cambodia, Laos, Thailand, and Viet-Nam to which the paragraph may become applicable in its context during the course of the execution of the Project. Similarly in the preceding paragraphs "the country" refers to either one or more of the territories of Cambodia, Laos, Thailand and Viet-Nam.

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15. Subject to a separate arrangement the Committee shall take necessary measures to make available for the Team part of petroleum and other mineral oils contributed by the Government of Iran.

16. The Committee and the Government of Cambodia shall take all necessary steps to make available for the Team, in time of the execution of the Project, the data, materials and reports on collateral investigations and studies being carried out at present or proposed to be carried out in the future, including maps and aerial photographs.

17. The Committee shall take necessary steps to provide the hydrologic data for Cambodia subsequent to the Lower Mekong Hydrologic Year Book for 1962 prepared by the Committee.

18. The Government of Cambodia shall provide the following:

(a) One engineer and one administrative officer for primarily liaison purpose.

(b) Free charge for ferry service and high priority for embarkation in the course of the investigation.

(c) Free use of a warehouse in Kratie for storage of equipment and materials.

(d) Free use of a ferry boat (with crew and fuel) of TP Kratie Office, whenever requested, in order to facilitate the transportation of personnel and materials in the river-crossing at Samboc (Kratie).

19. The Government of Cambodia shall provide, without delay after the present Plan of Operation comes into effect, a counterpart contribution of 150,000 Riels in cash to the Embassy of Japan, Phnom Penh, and the leader of the team or its designated staff member shall receive it therefrom.

V. COMPLETION OF THE INVESTIGATION PROJECT

20. The period required for the completion of the Investigation Project including the submission of the interim report is estimated at twelve months from the commencement of the work. This will, however, be affected to a certain extent by the progress of data collection.

/VI.

VI. SIGNATURES

21. Agreed on behalf of the Parties by the undersigned:

Date: 23 September 1964

(Signed) Hok Peng Heang
For the Government of Cambodia

Date: 23 September 1964

(Signed) Shotaro Takahashi
For the Government of Japan

Date: 23 September 1964

(Signed) Phouangkôh Phanareth
For the Government of Laos

Date: 23 September 1964

(Signed) Boonrod Binson
For the Government of Thailand

Date: 23 September 1964

(Signed) Trinh-Ngoc-Sanh
For the Government of the Republic of Viet-Nam

Date: 23 September 1964

(Signed) C. Hart Schaaf
Executive Agent
Committee for Coordination of Investigations of the Lower Mekong Basin